

Exploring human capital: putting human back into strategic human resource management

Patrick M. Wright, Cornell University

Gary C. McMahan, University of Texas at Arlington

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The field of strategic human resource management has seemingly rediscovered human capital with increasing research focused on human capital as a mediator in the relationship between HR practices and performance. In this paper we review human capital definitions and measurement approaches within this literature. We then identify some of the issues emerging with human capital research. Finally, we propose some future directions for research on human capital in organisations.

Contact: Patrick M. Wright, School of ILR, 388 Ives Hall, Cornell University, Ithaca, NY 14853-3901, USA. Email: patrick.wright@cornell.edu

INTRODUCTION

As the business environment becomes more competitive, firms' human resources (HRs) become more important to firm success. Wright and McMahan (1992) defined strategic human resource management (HRM) as 'the pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals' (p. 298). They stated that the domain of strategic HRM consisted of 'the determinants of decisions about HR practices, the composition of human capital resource pool, the specification of the required human resource behaviours, and the effectiveness of these decisions given various business strategies and/or competitive situations' (p. 298).

While this early definition highlighted the human capital or people, strategic HRM research quickly shifted to focus on the practices that impacted the human capital rather than the human capital itself. Following the publication of Huselid's (1995) seminal study showing an empirical relationship between HR practices he termed a 'High Performance Work System' (HPWS) and corporate financial performance, a wave of similar studies across a variety of contexts, geographies and industries quickly arose, each focusing on the relationship between HR practices and performance. This growing body of research has demonstrated a consistent relationship between HR practices and firm performance (Combs *et al.*, 2006). However, this seemingly robust relationship has led numerous authors to call for a better understanding of the 'black box' between HR practices and performance, *i.e.* explanations of the mediating mechanisms through which HR practices may drive performance. In essence, this stream of research almost seems an unnecessary detour from and calls for a return to a focus on the human capital.

Ironically, while the HR literature focused on HR practices to the detriment of human capital, the strategy literature seemingly discovered human capital. Since the late 1990s, with the publication of McKinsey's 'War for Talent' research, chief executive officers (CEOs) have increasingly emphasised the need for their firms to effectively attract, motivate, develop and retain talent. Correspondingly, a number of strategy researchers have begun to address the relationship between a firm's human capital and its performance (*e.g.* Hitt *et al.*, 2001). In other words, strategy researchers have focused on the resource that may provide competitive

advantage, but have provided little insight into how that resource may be acquired and developed.

Strategic HRM researchers' almost exclusive focus on the practices that can acquire and develop the human capital resource has resulted in their largely ignoring the resource itself. If strategic HRM researchers continue to focus solely on HR practices, strategy researchers will fill the void regarding the role of human capital in competitive advantage. The purpose of this article is to provide strategic HRM researchers with a more detailed analysis of the firm's 'human capital' and to develop a more detailed contextual description of this construct in order to provide a strong conceptual foundation for future strategic HRM research that focuses on the resource that can provide competitive advantage rather than the tools and techniques used to build that resource.

DEFINITIONS OF HUMAN CAPITAL

The concept of human capital has its origins in the economic literature. Becker (1964) defined human capital as '...the knowledge, information, ideas, skills, and health of individuals' (Becker, 2002: 1). Comparing human capital to financial or physical capital, he notes that all are forms of capital in the sense that they are assets that yield income and other useful outputs over long periods of time. On the other hand, the uniqueness of human capital stems from the fact that people cannot be separated from their knowledge, skills, health or values in the way they can be separated from their financial and physical assets (Becker, 2008).

While the economic view defines human capital in terms of knowledge, skills, etc., the major focus within this literature is on how individuals make choices regarding investments in their human capital, such as the choice to receive training, gain a college education, or begin a physical workout regimen. As Becker noted, 'Human capital analysis starts with the assumption that individuals decide on their education, training, medical care, and other additions to knowledge and health by weighing the benefits and costs' (Becker, 1996: 9–10).

Psychologists, on the other hand, have approached the concept of human capital from an entirely different perspective. Steeped in the individual differences literature (Spearman, 1927), they have tended to equate human capital with the knowledge, skills, abilities and other characteristics of individuals (Ployhart and Moliterno, 2011). In addition, rather than using rough proxies such as education, psychologists have developed psychometrically sound assessments of these characteristics of individuals. For instance, a tremendous literature has developed around the assessment of cognitive ability and its relationship with various aspects of job performance (Wright *et al.*, 1995; Gottfredson, 1997; Jensen, 1998; Schmidt and Hunter, 1998). In addition, rather than focus on the individual's choice to develop aspects of his/her human capital, psychologists have frequently examined the techniques organisations impose on people (*i.e.* the HR practices such as training, performance feedback, etc.) through which human capital is developed in individuals (Ford and Fisher, 1997; Bell and Kozlowski, 2008).

While these definitions have focused on the individual level concerning human capital, the construct has also received focus as a unit-level (team, organisation or even country) construct. The economic approach to human capital begins with individuals but does not limit itself to individual analysis. Rather, the whole approach provides a microfoundation for exploring a more macro set of phenomena. Becker notes, 'While the economic approach to behavior builds on a theory of individual choice, it is not mainly concerned with individuals. It uses theory at the micro level as a powerful tool to derive implications at the group or macro level. Rational individual choice is combined with assumptions about technologies and other determinants of opportunities, equilibrium in market and nonmarket situations, and laws, norms, and traditions

to obtain results concerning the behavior of groups' (Becker, 1996: 22). Consequently, much of the economic attention to human capital has explored how aggregate human capital (education of the workforce) impacts country productivity and economic success (Becker, 1996).

Thus, at the individual level, human capital consists of the characteristics possessed by an individual that can yield positive outcomes for that individual while at the unit level, human capital can refer to the aggregate accumulation of individual human capital that can be combined in a way that creates value for the unit. The relative ambiguity of this latter definition leads to a number of problematic issues arising as one moves the human capital construct or measure to the unit level, and we will address some of these issues below.

MEASUREMENT OF HUMAN CAPITAL IN STRATEGIC HRM

Because human capital is critical to organisational success, research in this area requires reliable and valid measures of the construct. However, there is little consistency in the ways we have attempted to measure human capital in strategic HRM. Three major types of measurement emerge when focusing on the strategic HRM literature across the individual, unit and firm level of analysis. These types of measurements include subjective, proxies and direct assessment measures.

Subjective measures

Subjective measures of human capital seem to dominate the strategic HRM literature. In the relatively few studies conducted that even include the term human capital, or for that matter, factor in human capital as part of the researcher's model, the data are captured primarily by single respondents. Previous research has employed scales made up of a small number of general items and the respondent is defined as the CEO or a unit manager, and in very few studies, more than one member of the firm. For example, Carmeli and Schaubroeck (2005) measured human capital by having the CEO or a top manager at each organisation in the study assess the organisation's perceived human capital. Human capital was measured as a perception of levels of education, training, work experience and skills of the entire organisation. The four items were: (a) 'our employees hold suitable education for accomplishing their job successfully', (b) 'our employees are well trained to accomplish their jobs successfully', (c) 'our employees hold suitable work experience for accomplishing their jobs successfully' and (d) 'our employees are well skilled professionally to accomplish their jobs successfully'.

Another example of a subjective measure was Wright *et al.*'s (1999) examination of the relationship between HR practices and petrochemical refinery performance. These authors asked the HR managers at refineries to report the skills and motivation of their operator workforce relative to other petrochemical refineries using multi-item scales of each construct.

One problem with these measures is that they are based on the perceptions of a single respondent; thus, common method bias/rater bias and/or inaccuracy of reporting may be present (Gerhart *et al.*, 2000a). Such responses may also have inconsistencies or low reliabilities (Gerhart *et al.*, 2000b).

More recently, Takeuchi *et al.* (2007) attempted to mitigate some of the earlier problems by having multiple raters. To assess organisational human capital, managers completed a human capital scale assessing the extent to which all of their employees 'are highly skilled', 'are widely considered to be the best in our industry', 'are creative and bright', 'are experts in their particular jobs and functions' and 'develop new ideas and knowledge'. This human capital scale was adopted from Subramaniam and Youndt (2005) and Youndt *et al.* (2004).

Proxies

The use of proxies for human capital (*i.e.* stand-in for other quantities that cannot be directly measured) is more prevalent in the economic and macro-organisational areas of inquiry. Although intuitively appealing and recognising the acceptable use of proxy measures in many areas of research, one critical issue is the validity of the 'stand-in' variable that replaces the difficult, costly or immeasurable quantification of, in this case, human capital.

Hitt *et al.* (2001, 2006) exemplify the proxy approach to measuring human capital. They assessed human capital in law firms using proxy measures such as 'quality of law school attended by partners', 'experience as partners in the current law firm' and 'total partner experience in the legal field'. Both of these studies provide insight into the role of human capital in organisation performance. However, these proxy measures provide only rough assessments of human capital. For example, one would expect significant variance in quality of lawyers produced by the same law school, yet all lawyers from a particular law school are assigned the same human capital score. Similarly, lawyers could have very different experience bases during the same number of years within the firm or within the field. Thus, while proxy measures are completely valid assessments of human capital, they are fraught with considerable error variance that can reduce the ability of a study to find significant relationships.

Direct assessments

There have been some notable studies in human capital research that come from psychology. These studies obviously tend to focus on assessment, test battery and evaluations in the measurement of human capital. Additionally, and noted elsewhere in our analysis, the issue of multi-level research and the problems associated with aggregated human capital have emerged from the field of psychology (Kozlowski and Klein, 2000; Ployhart and Moliterno, 2011). The concern with this type of measurement is to insure we are measuring the human capital construct as defined. Only measuring small parts of the human capital construct can lead to an incomplete understanding of human capital for academic consumption and organisation relevance.

Ployhart *et al.* (2006) focused on personality traits like important aspects of human capital. The authors collected individual-level personality trait data (emotional stability, conscientiousness, agreeableness and extraversion) and aggregated to the job and organisation levels to conduct their multi-level study. Similarly, Ployhart *et al.*'s (2009) multi-level study of human capital in retail organisations measured service orientation with items that assessed emotional stability, agreeableness, conscientiousness, educational success and situational judgement.

In a multi-level study of teacher human capital and performance, Pil and Leana (2009) employed both general and specific measures of human capital. The measures of teachers' general human capital were level of education achieved and years taught at a grade level. The task-specific measure of teachers' human capital assessed teachers' ability to teach mathematics.

Finally, Harris *et al.* (2009) assessed the human capital of National Collegiate Athletic Association (NCAA) men's basketball teams. Their measure of basketball players' human capital came from a third-party recruiting firm that assesses basketball players and based on their assessment provides a rating of each basketball players' human capital. Then, each player's assessment was aggregated to compute a team human capital score.

Note that direct assessments of human capital differ from the other approaches in two important ways. First, they directly assess characteristics of individuals instead of using indirect assessments. For instance, using years of education does not assess the quality of that education

in terms of the type of school, the major and the performance within that education, and thus significant error variance exists in the measure. Direct assessments, on the other hand, account for more variability in the characteristics being assessed, and thus reduce error variance. Second, these direct assessments are around specific human capital characteristics more relevant to the particular job at hand.

In sum, researchers have used a variety of measures of human capital in strategic HRM, strategic human capital and industrial/organisational psychology literatures. The use of subjective measures, proxy measures and direct assessments have provided an early foundation for this literature, yet they all point to the need for improved measurement based on a common definition of human capital at the proper level of analysis to improve research of strategic human capital in organisations.

ISSUES REGARDING HUMAN CAPITAL IN STRATEGIC HRM

Having reviewed some of the ways that human capital has been measured in this line of research, we now turn to some of the conceptual issues regarding the human capital construct.

Individual versus collective

As previously discussed, one key issue regarding human capital in the strategic HRM literature deals with the individual versus the collective distinction. The assumption that individuals possess human capital goes unquestioned. Macro-level scholars, particularly those with an economics orientation (Mahoney and Pandian, 1992; Wright *et al.*, 1994; Coff, 1999), treat human capital as a unit-level resource, equating it with the aggregate knowledge, skill and/or experience possessed by those in the unit. However, psychologists tend to raise questions when the human capital of a number of individuals is aggregated to the unit level. For instance, Ployhart and Moliterno (2011) note that simply aggregating individual scores to a unit score (a) fails to explain the mechanism through which the individual knowledge, skills, abilities, or other characteristics (KSAO)'s allegedly drive performance, (b) assumes a 'more is better' approach such that each incremental addition of human capital will increase performance and (c) fails to explain where the human capital resource originates, how it is created and how it is transformed.

Consequently, Ployhart and Moliterno (2011) define organisational human capital as 'a unit-level resource that is created from the emergence of individuals' KSAOs and present an 'emergence' model explaining how a number of individuals with specific human capital endowments can be combined in such a way that a 'human capital resource' emerges at the unit level. Kozlowski and Klein (2000: 55) describe an emergent phenomenon as one which '... originates in the cognition, affect, behaviors, or other characteristics of individuals is amplified by their interactions, and manifests as a higher-level, collective phenomenon'. The Ployhart and Moliterno model posits an emergence enabling process as comprised of the task complexity combined with behavioural, cognitive and affective enabling states resulting in a unit-level human capital resource.

This individual versus collective distinction may have important implications for the measurement of human capital. In essence, the microfoundation of human capital begins at the individual level, as each individual possesses a particular endowment of human capital. A simple aggregation of individual human capital to the unit level implies a main effect for human capital on performance, ala the 'more is better' assumption. Most empirical treatments of unit-level human capital have used such an approach (Hitt *et al.*, 2001; Ployhart *et al.*, 2009).

However, the emergence phenomenon implies some sort of synergistic effect . . . *i.e.* that the unit-level human capital is either more or less than the simple aggregation of the individuals. Such an assumption would lead to either a complex mathematical composition model (such as the variability in individual human capital within the unit rather than the average) using individual human capital measures, or to a direct unit-level measure either subjectively (*e.g.* manager assessments) or objectively (*i.e.* some outcome measures).

Specific versus general

The second major distinction regarding human capital involves the generalisability of human capital across organisations. Becker (1996) stated, 'One of the most influential theoretical concepts in human capital analysis is the distinction between general and specific human capital. By definition, firm-specific knowledge is useful only in the firms providing it, whereas general knowledge is useful also in other firms' (p. 11). While this distinction implies some sort of dichotomy, Becker and others have advocated that all human capital characteristics can be arranged along a general to specific dimension such that few, if any, human capital is purely general or purely specific.

Within the strategic HRM literature, much attention has focused on the specific aspects of human capital. Because the resource-based view advocates unique resources of firms like sources of competitive advantage, many have interpreted this as suggesting that competitive advantage through people can best be achieved through the development of firm-specific human capital (Barney and Wright, 1998).

The logic underlying this position is that general human capital characteristics, because they can be used by a large number of firms, will be compensated at a market level. In other words, employees can accrue from the market the rents attributable to their general human capital. If one firm will not compensate them thus, they will simply go to another firm that will. However, because specific characteristics are only valuable to the focal firm, other firms will not pay for those skills, and thus the employee cannot accrue the rents from them except with the focal firm.

This distinction and logic has significant implications for strategic HRM. First, firms should compensate employees for specific human capital in order to incent them to gain such human capital. However, the distribution of the rents from specific human capital need not go all to the employee. In fact, Becker (1996) recognised this as the central dilemma regarding specific human capital. He wrote, "Firm specific investments produce rents that must be shared between employers and employees, a sharing process that is vulnerable to 'opportunistic' behavior because each side may try to extract most of the rent after investments are in place. Rents and opportunism due to specific investments play a crucial role in the modern economic theory of how organizations function" (pp. 11–12). In other words, the firm may not gain an advantage if the employees accrue all the rents from their specific human capital, so the firm will seek to only partially compensate for those characteristics. Additionally, as the firm does not fully compensate the employees, they have an incentive to withhold the productivity stemming from their specific human capital, potentially putting the firm at a disadvantage in the marketplace. This is not to say that specific human capital is not desirable nor that it cannot be developed as a source of competitive advantage, but rather to note that it does not guarantee a competitive advantage.

On the other hand, general human capital can also act as a source of competitive advantage. In fact, in their original analysis of the potential for human resources to be a source of sustainable competitive advantage, Wright *et al.* (1994) used the most general human capital, general cognitive ability, as an example of a human capital pool characteristic that could

provide competitive advantage. They noted that while the characteristic is general, the level of the characteristic is unique (*i.e.* it is normally distributed in the population, and the higher the cognitive ability, the fewer the individuals that possess it.) In addition, they noted that such a resource suffers from imperfect immobility such that the switching costs like uncertainty about a new work environment, learning new processes and procedures, etc., discourage employees from moving from firm to firm.

In summary, the specific-general distinction provides a useful way of thinking about the transferability of human capital but does not lead to a conclusion that one or the other is the only source of value creation and potential competitive advantage. In addition, the issue of the distribution of rents from specific capital leads to the potential for employees to withhold effort. This has implications for employee motivation and behaviour.

Skills versus motivation versus behaviour

Another issue regarding human capital within the strategic HRM literature deals with the 'black box' between human capital and competitive advantage. Note that treatments of human capital tend to focus on the characteristics, *e.g.* education, knowledge, skill, etc., of individuals or groups. However, characteristics do not, in and of themselves, result in productivity, rather they provide the foundation. Productivity stems most directly from the behaviour of employees, and many highly skilled employees can exhibit mediocre or even inferior performance. For instance, Wright and Snell (1998) noted that during the turnaround at Continental Airlines in the US, on-time performance increased from the bottom to the top of the industry in one month, yet it was done with the same employee skill base. The transformational performance change stemmed from those skilled employees displaying their human capital through behaving differently.

The difference between skills and behaviour was not lost on Becker. While he defined human capital in terms of characteristics, he noted that it encompassed a greater array of aspects, even those that might be considered behaviour. For instance, he stated 'The concept of human capital also covers accumulated work and other habits, even including harmful addictions such as smoking and drug use'. (Becker, 1996: 9–10). He also stated, 'The various kinds of behavior included under the rubric of human capital help explain why the concept is so powerful and useful. It also means that the process of investing or disinvesting in human capital often alters the very nature of a person: training may change a lifestyle from one with perennial unemployment to one with stable and good earnings, or accumulated drinking may destroy a career, health, and even the capacity to think straight' (Becker, 1996: 10).

The concept of motivation bridges the divide between human capital and behaviour. In the case of Continental Airlines, instituting an on-time bonus that each employee would earn if the company performed at the top of the industry served as the motivator for employees to translate their skills into behaviour. Thus, thorough treatments of human capital in strategic HRM should go beyond not only examining the characteristics of the workforce but also examining differences in employee performance that stem from those characteristics. Furthermore, the relationships among human capital, motivation-based and/or fairness-based HRM practices, employee behaviours and performance, at the hypothesised level(s) of analysis, should be an important focus of future research.

Ownership of capital

Finally, the ownership of human capital provides another issue regarding strategic HRM. Much of the research within the resource-based view of the firm examines characteristics such as patents, technologies, etc., each of which is an asset wholly owned by the firm. However,

human capital and any resources with a significant human capital component, *e.g.* organisational capabilities or dynamic capabilities, differ in that the firm does not own the resource. The firm may temporarily possess the resource through an agreed upon employment relationship, but the relationship can be severed at any time.

This issue relates to the previous distinction between ability and behaviour. Employees possess human capital that the firm may acquire through an implicit employment contract. However, if the employee feels that the firm has not dealt fairly, s/he can withhold the effort or behaviour that the firm requires or s/he can simply leave the firm. Wright *et al.* (2001) noted that this 'free will' component of employees makes the use of human capital as a source of competitive advantage problematic. Employees sense, think and feel, and these processes lead them to choose whether or not, or how much, to contribute. Thus, firms can possess, not own, high levels of human capital in their workforce, and yet have suboptimal performance. While many practitioners pay lip service to this 'Our most important assets walk out the door each day', this aspect of human capital seems to be largely ignored in the human capital literature.

FUTURE DIRECTIONS IN HUMAN CAPITAL

While the concept of human capital may be 40 years old, its treatment in organisational research is in an infant stage. The issues identified in the previous section present opportunities and challenges for future research and theory development regarding the role of human capital in firm competitive advantage. In particular, we focus on three: emergence, measurement and context.

Emergence

As previously discussed, the distinction between individual and organisational human capital has important implications for the study of human capital in organisations. In one sense, the organisation's human capital is a function of the sum of the individual human capital. However, the function needs not be linear nor necessarily positive. The nature of the function may depend upon the emergence phenomenon.

Ployhart and Moliterno's (2011) model provides a framework for explaining how the aggregated individual human capital can be positively related to the organisational human capital. Essentially they argue that when the task interdependence and enabling states exist, the aggregated individual human capital will result in an organisation level construct of human capital, and in these cases, one assumes that the higher the individual level human capital, the higher the level of organisational human capital.

When these conditions do not exist, the organisational human capital may not be directly, nor even positively related to the aggregated individual human capital. For instance, one could picture an organisation made up of individual 'stars' whose competitive ambitions lead to suboptimal performance. Thus, Ployhart and Moliterno's model provides a useful framework for future empirical research examining the relationship between individual and organisational human capital.

However, the emergence concept comes from industrial/organisational psychology and its value and validity may not be recognised by other disciplines. For instance, economists frequently aggregate human capital characteristics without any concern regarding the 'emergence' concept. Thus, emergence may serve as a divisive construct that stifles cross-fertilisation of research disciplines. This certainly means that researchers must uncover empirical evidence for the need to consider emergence before imposing the construct on all human capital research.

Measurement

The issue of emergence presents a set of measurement challenges for examining human capital in organisations. Primary among these challenges is the level of measurement. For instance, Ployhart and Moliterno (2011) suggest that when possible, measurement should be conducted at the individual level and then aggregated up to the organisation level. However, such a process assumes a linear relationship between individual and organisational levels. To the extent that the data diverges from this assumption, the aggregated measure may be subject to substantial error variance.

However, the alternative presents problems as well. If one were able to assess some form of 'organisational human capital' through a measure at the organisation level, then the measure ignores the emergence process and misses important individual level variance. For instance, a high performing unit may be high performing because of high individual human capital and average emergence or due to average human capital that has a high level of emergence.

Thus, to rigorously study the construct of organisational human capital, one must assess the individual human capital and some form of the emergence process. This will require significant data collection and analysis efforts that may be quite difficult to conduct. It will entail gathering clear and specific human capital measures from each individual within the unit, and then exploring a variety of compositional models to determine which one is at work. And all this effort may result in finding that a simple aggregation clearly works sufficiently.

On the other hand, one could ignore the composition and focus on the outcome in terms of the capability of the unit. For example, Takeuchi *et al.*'s (2007) use of multiple raters rating the human capital of the 'group' of employees provides one strategy. Such a measure ignores the variability of individual human capital within the unit in order to capture a clearer assessment of the unit-level construct. However, such a method does require more than one respondent in order to prevent idiosyncratic measures.

We do not advocate that one approach is superior to the other as each has benefits and tradeoffs. Rather, we suggest that researchers should think clearly about the question they seek to answer regarding human capital and let that drive their choice of measurement strategy. Furthermore, we suggest that reviewers should not impose their idiosyncratic views of valid measurement of human capital until empirical evidence suggests the superiority of one measurement approach.

Individual context, social context, task context

Finally, related to the emergence and measurement challenges, the multiple contexts that comprise human capital at the organisation level must be recognised in order to effectively distinguish among different human capital related constructs. We propose that these various contexts provide the foundation for distinguishing among human capital, human capability and organisational capability.

First, the individual context recognises that each individual in the organisation has characteristics that comprise human capital. He/she also engages in the processing of information, interpretation and reaction to that information in making choices about how to feel and behave (Wright and Nishii, in press). The aggregation of the individual human capital, we propose, constitutes the organisation or unit's 'human capital'. Thus, this unit-level construct comprises the aggregation of individual-level constructs. This has largely been the construct that researchers have captured when using aggregated measures of human capital (*e.g.* Hitt *et al.*, 2001; Ployhart *et al.*, 2009).

Second, the organisation provides a social context in that each individual interacts with the other individuals that make up the unit or organisation. This social context can impact how individuals perceive, process and react to information. In addition, the relationships with others influence choices about how to behave whether in the interest of the organisation's shareholders, customers and/or employees. The most critical aspect of the social context, however, deals with the level of coordination and cooperation among the individuals. In essence, the social context provides the platform for exploring how human capital and social capital (Leana and Van Buren, 1999) combine. The combination of human and social capital provides the basis for what we would call 'human capability', or the ability of a group of individuals to cooperatively perform a function or set of functions. We believe that subjective measures such as those assessed by Wright *et al.* (1999) and Takeuchi *et al.* (2007), whether they mean to or not, capture this human capability construct.

Finally, the task context refers to the nature of the tasks required of the individuals as well as the systems, processes and technologies available to them. As Ployhart and Moliterno note, the level of task interdependence impacts the emergence process. However, it also can impact the necessity of emergence as well as the social context. High levels of task interdependence requires emergence in order to optimise the impact of the individual human capital. High task interdependence also provides more opportunities for the social context to impact individuals. In addition, however, the technologies like computers, machines, etc. comprise the direct sets of tools that people have to perform. We would suggest that the human capability in a task context like interdependence, processes, tools, etc., forms the foundation of an 'organisational capability'. This organisational capability construct has largely been ignored within the strategic HRM literature.

We propose that the concepts of human capital, human capability and organisation capability guide future theorising and empirical research on human capital. Each concept should have distinct measurement approaches, and distinct theoretical propositions regarding antecedents and causes, and may be the foundation for gaining a better understanding of the role of human capital in competitive advantage.

SUMMARY AND CONCLUSIONS

Our reading of the human capital literature in both strategic HRM and strategy literatures indicates that while the construct is gaining popularity, the knowledge of the complexity of the construct and its measurement has not grown at the same rate. We have attempted to delineate some of the definitional and measurement issues regarding the construct of human capital.

Becker in his Nobel Prize speech noted that 'Human capital is so uncontroversial nowadays that it may be difficult to appreciate the hostility in the 1950s and 1960s toward the approach that went with the term. The very concept of human capital was alleged to be demeaning because it treated people as machines' (Becker, 1996: 10). While this hostility has waned, the risk remains that strategic HRM researchers may similarly treat human capital as a form of capital owned and controlled by the firm. To do so would miss the complexity of the construct and continue to ignore the 'human' in strategic HRM.

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